

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT7241293

<b>SUBMISSION TYPE:</b>	RESUBMISSION
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>RESUBMIT DOCUMENT ID:</b>	507067345

**CONVEYING PARTY DATA**

Name	Execution Date
INNOVATIVE TECHNOLOGY LAB CO., LTD.	12/20/2021

**RECEIVING PARTY DATA**

<b>Name:</b>	CISCO SYSTEMS, INC.
<b>Street Address:</b>	170 WEST TASMAN DRIVE
<b>City:</b>	SAN JOSE
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95134-1706

**PROPERTY NUMBERS Total: 31**

Property Type	Number
Patent Number:	10182467
Patent Number:	10531513
Patent Number:	11076444
Patent Number:	10374755
Patent Number:	11128402
Patent Number:	9750016
Patent Number:	10039101
Patent Number:	10531455
Patent Number:	9775186
Patent Number:	10009950
Patent Number:	10681758
Patent Number:	11116023
Patent Number:	10383117
Patent Number:	10687334
Patent Number:	10257878
Patent Number:	10645747
Patent Number:	9814045
Patent Number:	10397925
Patent Number:	11032821

PATENT

Property Type	Number
Patent Number:	10880925
Patent Number:	10945252
Application Number:	17355121
Application Number:	17406029
Application Number:	16735647
Application Number:	17393353
Application Number:	16882630
Application Number:	17200726
Application Number:	17307196
Application Number:	16952766
Application Number:	17161013
Patent Number:	10986687

**CORRESPONDENCE DATA**

**Fax Number:** (408)526-5952

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

**Phone:** 4085253737

**Email:** patent-administrators@cisco.com

**Correspondent Name:** KAREN A. HALLOCK CISCO SYSTEMS INC.

**Address Line 1:** 170 WEST TASMAN DRIVE

**Address Line 4:** SAN JOSE, CALIFORNIA 95134-1706

**ATTORNEY DOCKET NUMBER:** INNOV\_CSI RESUBMITTED ASS

**NAME OF SUBMITTER:** KAREN A. HALLOCK

**SIGNATURE:** /Karen A. Hallock/

**DATE SIGNED:** 03/23/2022

**Total Attachments: 10**

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page1.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page2.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page3.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page4.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page5.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page6.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page7.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page8.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page9.tif

source=Confirmatory Assignment FOR RE\_RECORDINGv2#page10.tif

**EXHIBIT C**  
**CONFIRMATORY ASSIGNMENT**

**WHEREAS**, Innovative Technology Lab Co., Ltd, a Korean limited liability company with its principal place of business at 4<sup>th</sup>, 5<sup>th</sup> floor, Chandeok Bldg., Baume-ro 175, Seocho-gu, Seoul, Korea ("**ASSIGNOR**"), owns certain patent applications and/or registrations, as set forth in Exhibit A attached hereto and incorporated herein by this reference ("**LISTED PATENTS**"); and

**WHEREAS**, Cisco Systems, Inc., a Delaware corporation having a place of business at 170 West Tasman Drive, San Jose, California 95134-1706, ("**ASSIGNEE**"), desires to acquire all of the right, title and interest of ASSIGNOR in, to and under the LISTED PATENTS and FAMILY PATENTS (as defined below) thereof (collectively, the "**ASSIGNED PATENTS**");

**WHEREAS**, ASSIGNOR and ASSIGNEE have entered into a certain Patent Assignment Agreement, dated December 14, 2021, assigning, among other things, all right, title and interest in and to the ASSIGNED PATENTS from ASSIGNOR to ASSIGNEE;

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR hereby irrevocably assigns, conveys, sells, grants, and transfers to ASSIGNEE (and ASSIGNEE hereby accepts the assignment, conveyance, sale, grant, and transfer to ASSIGNEE of) all of ASSIGNOR's right, title, and interest of every kind and character throughout the world, in and to the ASSIGNED PATENTS, including, without limitation, (a) any and all enforcement rights under or on account of the ASSIGNED PATENTS (including all rights to causes of action, whether known or unknown and whether currently pending, filed, or otherwise, for damages, injunctive relief, and any other remedies of any kind, for past, current, and future infringement, misappropriation, or violation); (b) any and all rights to collect royalties or other payments under or on account of the ASSIGNED PATENTS; (c) any and all rights to file applications for the ASSIGNED PATENTS (including without limitation with respect to the underlying inventions, invention disclosures, and discoveries therein) throughout the world; and (d) and any and all other rights and interests arising out of, in connection with, or in relation to, the ASSIGNED PATENTS.

For purposes of this Confirmatory Assignment, "**FAMILY PATENTS**" means: (a) any and all Patents claiming, or entitled to the benefit of, priority to any of the Listed Patents, directly or indirectly, in whole or in part (including, without limitation, any Patents filed, issued, based on, or resulting from a Listed Patent); (b) any and all Patents claiming, or entitled to the benefit of, priority to any Patent to which a particular one of the Listed Patents claims or is entitled to the benefit of priority, directly or indirectly, in whole or in part; and (c) any and all Patents from which any of the Listed Patents claims or is entitled to the benefit of priority, directly or indirectly, in whole or in part; and "**PATENTS**" means any and all past, present, or future patents, utility models, patent registrations, and equivalent rights, in all countries of the world (including, e.g., originals, provisionals, continuations, continuations-in-part, divisionals, re-exams, extensions, substitutions, and reissues), and any other inventions, procedures, or formalities with respect to the foregoing that may result in an enforceable patent right anywhere worldwide, including all applications and registrations for, or issuing from, any of the foregoing.

ASSIGNOR hereby authorizes and requests the United States Commissioner of Patents and Trademarks and the relevant officials of Non-US countries to implement this Confirmatory Assignment.

[SIGNATURE PAGES FOLLOW]



공증인가 법무법인(유한) 에이펙스

[별지 제43호서식]

등부 2021 년 제 9221 호

Registered No. 2021 - 9221

인 중

NOTARIAL CERTIFICATE

위 특허양도계약서 에

Young Ok Lim

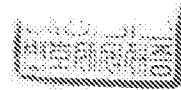
기재된 주식회사 아이티엘  
사내이사 황 차동

attorney-in-fact of Cha Dong Hwang  
CEO  
Innovative Technology Lab Co., Ltd.

의 대리인 임 영옥 은

본 공증인 면전에서 위 본인이  
서명날인 한 것임을 자인하였다

appeared before me and  
admitted said principal's  
subscription to the attached  
PATENT ASSIGNMENT AGREEMENT



2021 년 12 월 17 일  
이 사무소에서 위 인증한다.

This is hereby attested on  
this 17th day of December, 2021  
at this office.

공증인가 법무법인(유한)에이펙스

APEX LLC

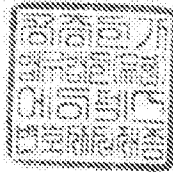
소속 서울중앙지방검찰청  
서울특별시 강남구 테헤란로 131,  
10층(역삼동, 한국지식재산센터)

Belong to Seoul Central District Prosecutors' Office  
10F, (Yeoksam-dong,  
Korea Intellectual Property Service Center),  
131, Teheran-ro, Gangnam-gu, Seoul Korea

공증담당  
변호사

*서재종*

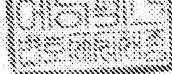
Attorney-at-law



*Jae Jong Seo*

Jae-Jong Seo

This office has been authorized by the Minister  
of Justice, the Republic of Korea to act as  
Notary Public since September 28, 2009 under Law  
No. 27.



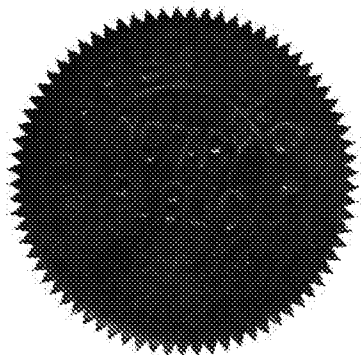
# 공증인가 법무법인(유한) 에이펙스

서울특별시 강남구 테헤란로 131, 10층  
(역삼동, 한국지식재산센터)  
[별지 제41호서식]

(전화)02-2018-1544  
(팩스)02-2018-1573

Registered No. 2021 - 9221

## NOTARIAL CERTIFICATE



**APEX LLC**

Belong to Seoul Central District Prosecutors' Office

IDF, (Yeoksam-dong, Korea Intellectual Property Service Center), 131, Teheran-ro, Gangnam-gu, Seoul, Korea

IN WITNESS WHEREOF, ASSIGNEE has caused this Confirmatory Assignment to be duly executed by an authorized officer on this 20 day of December, 2021.

By: [Signature]

Name: Dan Lory

Title: V.P. Legal & Deputy General Counsel

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss.

On \_\_\_\_\_, 2021, before me, the undersigned notary public in and for said County and State, personally appeared \_\_\_\_\_

\_\_\_\_\_ personally known to me (or)  
\_\_\_\_\_ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity(ies) and that, by his/her signature(s) on the instrument, the person(s) or the entity(ies) upon behalf of which the person(s) acted executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
My commission expires on \_\_\_\_\_



# ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California  
County of Santa Clara

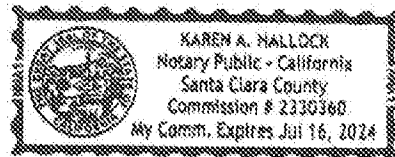
On December 20, 2021 before me, Karen A. Hallock  
(insert name and title of the officer)

personally appeared Dan Lang  
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Karen A. Hallock (Seal)

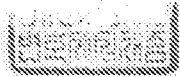




**EXHIBIT A**  
**LISTED PATENTS**

Family No.	Region	Patent No.	Status	Application No.	Representative Title
1	KOREA		Abandoned	10-2016-0065166	METHOD AND APPARATUS FOR TRANSMITTING AND RECEIVING CONTROL CHANNEL AND DATA CHANNEL FOR NR SYSTEM
	KOREA		Abandoned	10-2017-0064371	
	KOREA		Pending	10-2017-0065238	
	PCT			PCT/KR2017/005523	
	USA	10,945,252	Issued	16/304,902	
	USA		Pending	17/161,013	
	CHINA		Pending	201780046551.3	
	EUROPE		Pending	17803113.4	
2	INDIA		Pending	201817049428	METHOD AND APPARATUS FOR PERFORMING RANDOM ACCESS
	KOREA		Pending	10-2018-0018724	
	USA	10,880,925	Issued	16/273,589	
	USA		Pending	16/952,766	
	PCT			PCT/KR2019/001742	
	EUROPE		Pending	19753914.1	
	CHINA		Pending	201980013310.8	
	INDIA		Pending	202017030454	
3	VIETNAM		Pending	1-2020-04572	METHOD AND APPARATUS FOR TRANSMITTING BUFFER STATUS REPORT IN WIRELESS COMMUNICATION SYSTEM SUPPORTING DEVICE TO DEVICE COMMUNICATION
	KOREA	10-2183333	Issued	10-2014-0102091	
	KOREA	10-2228217	Issued	10-2020-0156173	
	KOREA	10-2312282	Issued	10-2021-0031201	
	KOREA		Pending	10-2021-0132458	
	USA	9,814,045	Issued	14/821,661	
	USA	10,397,925	Issued	15/722,226	
	USA	11,032,821	Issued	16/507,140	
	USA		Pending	17/307,196	
	PCT			PCT/KR2015/008277	
	CHINA	CN 106576079	Issued	201580042502.3	
	CHINA		Pending	202011231615.7	
	EUROPE	EP 3179767	Issued	15829785.3	
	EUROPE		Notice of allowance	20182818.3	
GERMANY	EP 3179767	Issued			
UNITED KINGDOM	EP 3179767	Issued			
FRANCE	EP 3179767	Issued			

Family No.	Region	Patent No.	Status	Application No.	Representative Title
4	INDIA		Pending	201717006681	<p>METHOD AND APPARATUS FOR MANAGING BUFFER STATE REPORT IN WIRELESS COMMUNICATION SYSTEM SUPPORTING DEVICE TO DEVICE COMMUNICATION</p> 
	KOREA		Abandoned	10-2014-0102128	
	KOREA	10-2236589	Issued	10-2014-0153775	
	KOREA	10-2318913	Issued	10-2021-0041715	
	KOREA		Pending	10-2021-0142035	
	USA	10,257,878	Issued	14/820,443	
	USA	10,645,747	Issued	16/279,002	
	USA	10,986,687	Issued	16/837,362	
	USA		Pending	17/200,726	
	PCT			PCT/KR2015/008254	
	CHINA	CN 106664595	Issued	201580042489.1	
	CHINA		Pending	202010776446.9	
	CHINA		Pending	202010776679.9	
	EUROPE	EP 3179766	Issued	15829540.2	
	EUROPE		Pending	19220086.3	
	GERMANY	EP 3179766	Issued	60 2015 046 996.8	
	UNITED KINGDOM	EP 3179766	Issued	3 179 766	
	FRANCE	EP 3179766	Issued	3 179 766	
	NETHERLAND	EP 3179766	Issued	3 179 766	
	INDIA		Pending	201717006195	
5	KOREA		Abandoned	10-2016-0126853	<p>METHOD AND APPARATUS FOR DETERMINING RESOURCE POOL</p>
	KOREA		Pending	10-2016-0137463	
	USA	10,383,117	Issued	15/719,905	
	USA	10,687,334	Issued	16/458,089	
	USA		Pending	16/882,630	
	PCT			PCT/KR2017/011054	
	CHINA		Pending	201780072819.0	
	EUROPE		Pending	17856853.1	
INDIA		Pending	201917016847		
6	KOREA		Pending	10-2014-0102572	<p>APPARATUS AND METHOD FOR DETERMINING D2D DATA RESOURCE FOR D2D COMMUNICATION</p>
	KOREA		Pending	10-2021-0058428	
	USA	9,750,016	Issued	14/819,232	
	USA	10,039,101	Issued	15/657,030	
	USA	10,531,455	Issued	16/024,737	
	USA		Pending	16/735,647	
	PCT			PCT/KR2015/008185	

Family No.	Region	Patent No.	Status	Application No.	Representative Title		
	CHINA	CN 106664684	Issued	201580042496.1	 <p>APPARATUS AND METHOD FOR TRANSMITTING D2D DATA BASED ON RESOURCE PATTERN</p>		
	CHINA		Pending	202010831428.6			
	CHINA		Pending	202010831653.X			
	CHINA		Pending	202010832879.1			
	EUROPE	EP 3179793	Issued	15829014.8			
	UNITED KINGDOM	EP 3179793	Issued				
	GERMANY	EP 3179793	Issued				
	FRANCE	EP 3179793	Issued				
	INDIA		Pending	201717007052			
	KOREA	10-2182491	Issued	10-2014-0102662			
	KOREA	10-2335764	Issued	10-2020-0154484			
	USA	9,775,186	Issued	14/820,461			
	USA	10,009,950	Issued	15/691,636			
	USA	10,681,758	Issued	16/016,780			
	USA	11,116,023	Issued	16/876,316			
	USA		Pending	17/393,353			
	PCT			PCT/KOREA2015/008 317			
	CHINA	CN 106576357	Issued	201580042505.7			
	CHINA		Pending	202011245306.5			
	EUROPE	EP 3197219	Issued	15829326.9			
	EUROPE		Pending	20168204.4			
	GERMANY	EP 3197219	Issued	60 2015 053 133.7			
	ENGLAND	EP 3197219	Issued	3 197 219			
	FRANCE	EP 3197219	Issued	3 197 219			
	INDIA		Pending	201717007322			
	7	KOREA	10-2250056	Issued		10-2014-0055812	<p>METHOD AND APPARATUS OF SCHEDULING FOR DEVICE TO DEVICE (D2D) COMMUNICATION</p>
		KOREA		Pending		10-2021-0057243	
USA		10,374,755	Issued	14/708,083			
USA		11,128,402	Issued	16/452,073			
USA			Pending	17/406,029			
PCT				PCT/KR2015/004653			
CHINA		CN 106464349	Issued	201580024387.7			
CHINA			Pending	201910611313.3			
CHINA			Pending	201910612074.3			
EUROPE		EP 3142265	Issued	15789040.1			

Family No.	Region	Patent No.	Status	Application No.	Representative Title
	EUROPE		Pending	19212667.0	
	GERMANY	EP 3142265	Issued	3 142 265	
	UNITED KINGDOM	EP 3142265	Issued	3 142 265	
8	KOREA		Pending	10-2015-0110849	APPARATUS AND METHOD FOR TRANSMITTING UPLINK CONTROL INFORMATION THROUGH A PHYSICAL UPLINK CONTROL CHANNEL
	KOREA		Pending	10-2015-0110850	
	KOREA		Pending	10-2015-0110851	
	USA	10,182,467	Issued	15/230,249	
	USA	10,531,513	Issued	16/283,794	
	USA	11,076,444	Issued	16/735,664	
	USA		Pending	17/355,121	
	PCT			PCT/KR2016/008665	

